Arnetta McRae, Chair, Public Service Commission
861 Silver Lake Boulevard
Cannon Bldg Suite 100
Dover, DE 19904

Subject: Comments from Sierra Club, Southern Delaware Group, on PSC Docket No. 06-241

Dear Ms. McRae,

Following is a copy of the e-mail message sent to you on November 13th.

Yours truly,
Steve Callanen
Chairman, Energy Subcommittee,
Sierra Club, Southern Delaware Group
302-539-0635

----- Original Message -----

From: Steve and Sallie Callanen

To: Lee Ann - Gov. Minner Walling ; Lee Ann Walling ; Blaine - Gov. Minner's Office Breeding ; Russell - Controller Gen. Larson ; Charlie Smisson ; Jennifer - Off. M&B Davis ; John Hughes

Cc: Maryann - Sen. Biden's Office Kelley ; Kelly - Rep. Castle's Office Wolfe ; Lt Gov. John Carney ; Sen. Thurman Adams ; Sen. Anthony DeLuca ; Sen. Charles Copeland ; Sen. George Bunting ; Sen. Gary Simpson ; Sen. Karen E. Peterson ; Rep. Terry Spence ; Rep. Richard Cathcart ; Rep. Robert Gilligan ; Rep. Joseph Booth ; Rep. Gerald Hocker ; Rep. Pamela S. Maier ; Rep. Peter Schwartzkopf ; Jack, DE Treas. Markell ; Karen Nickerson ; Sen. David McBride

Sent: Tuesday, November 13, 2007 4:42 PM

Subject: PSC - Wind Power Comments from Sierra Club, Southern Delaware Group

November 13, 2007

Subject: Comments from Sierra Club, Southern Delaware Group, on PSC Docket No. 06-241

Dear Governor Ruth Ann Minner,
Arnetta McRae, Chair, Public Service Commission
Russell T. Larson, Controller General,
Charlie T. Smisson, Jr., State Energy Coordinator, Delaware Energy Office,
Jennifer W. Davis, Director, Office of Management and Budget
John A. Hughes, Secretary, Department of Natural Resources and

Environmental Control

Attached is an August 29, 2007, letter sent to Meg Maley, Chair, Delaware Cancer Consortium Environment Committee, documenting public health issues related to Delaware's coal burning power plants. This letter is being submitted to the Public Service Commission at this time because it identifies major health and pollution issues confronting Delaware citizens that will not be exacerbated by the construction of clean renewable offshore wind power - a far superior option for protecting the health of Delaware's citizens and Delaware's fragile Inland Bays watershed.

In view of the significant health, environmental and long term cost benefits provided by wind power, it is absolutely necessary that the process used to evaluate the offshore wind farm proposal be totally objective and transparent, and include all health and environmental costs associated with the burning of fossil fuels. The public interest is not served by tasking Delmarva Power to negotiate a contract with Blue Water Wind.

Yours truly,
Steve Callanen
Chairman, Energy Subcommittee,
Sierra Club, Southern Delaware Group
302-539-0635

Copy to:
Honorable Joseph R. Biden, Jr.
Honorable Thomas R. Carper
Honorable Michael N. Castle
Lt. Governor John C. Carney, Jr.
Senator Thurman Adams Jr., Senate President Pro Tempore
Senator Anthony J. DeLuca, Senate Majority Leader
Senator Charles L. Copeland, Senate Minority Leader
Senator George H. Bunting, Jr.
Senator F. Gary Simpson
Senator Karen E. Peterson
Senator David McBride
Representative Terry R. Spence, Speaker of the House
Representative Richard C. Cathcart, House Majority Leader
Representative Robert F. Gilligan, House Minority Leader
Representative Joseph W. Booth
Representative V. George Carey
Representative Gerald W. Hocker
Representative Pamela S. Maier
Representative Peter C. Schwartzkopf
Jack Markell, Delaware State Treasurer
Karen Nickerson, Delaware Public Service Commission, Secretary

38986 Bayfront Drive
Ocean View, DE 19970
August 29, 2007

Ms. Meg Maley, Chair, Delaware Cancer Consortium Environment Committee
c/o Amy Maracle, Health Promotions & Disease Prevention Section, DPH, Suite 7
540 S. Dupont Highway, Dover, DE 19901

Attachments:

1) 2005 TRI Appendix E 150 dpi clr
2) 2005 TRI Appendix C 150 dpi clr QF85
3) IRPP Aerial View of Coal Ash Landfill & Burton Island- Google Earth QF90
4) IRPP Coal Ash Landfill 12-13-06 1935
5) IRPP Coal Ash Landfill 12-13-06 QF85 1937
6) IRPP Coal Ash Landfill 12-13-06 QF85 1938

Dear Ms. Maley,

I appreciated the opportunity to present a few comments at the Delaware Cancer Consortium Environment Committee meeting on August 13th in Newark. Please forward these additional comments to members of the Cancer Consortium Environment Committee.

You may recall that I submitted a statement noting that although Lieutenant Gov. John Carney's push for further epidemiological studies and better information related to the 'cancer cluster' area surrounding the 1956 vintage Indian River Power Plant (IRPP) is to be commended, that his proposed studies should include health impacts related to the inhalation of fine particles (smaller than 2.5 microns), which are emitted during the combustion of fossil fuels, and for which state regulations are nonexistent.

According to the *American Lung Association State of the Air 2006* report:

> "Thousands of studies have documented that the current limits on particle pollution do not protect the health of the public 'with an adequate margin of safety' as required by the Clean Air Act." And., "Short-term, or acute, exposure to particle pollution has been shown to increase heart attacks, strokes and emergency-room visits for asthma and cardiovascular disease, and most importantly, increase the risk of death. . . . Many groups are at greater risk because of their age or the presence of asthma or other chronic lung or cardiovascular disease or because they have diabetes."

Those groups include the oldest and youngest segments of the population and people suffering with chronic bronchitis and emphysema. Cardiovascular diseases include heart disease, heart attacks and strokes.

My August 13th statement pointed out that a Harvard Health Study indicates there is five times greater risk of disease and premature death for those living within a 30-mile radius of coal burning power plants. A 2002 report published by the Clean Air Task Force, entitled *Children at Risk*, identifies that the population within a 30-mile radius of Delaware's coal burning power plants consists of 142,099 children – 8,312 of whom suffer from pediatric asthma (5.8 percent). Sadly, 266 Delaware schools are reportedly located within this high-risk 30-mile radius.

The Cancer Consortium should also be aware that according to the 2000 U.S. Census 56.4 percent of Wilmington's residents (41,001) and 19.4 percent of Millsboro's residents (458) are African American. Therefore, African Americans represent a disproportionately large percentage of the population living in closest high-risk proximity to Delaware's power plants. A social justice issue exists if the state fails to eliminate hazardous emissions from the Indian River and Edge Moor Power Plants.

I also submitted a copy of a March 17, 2007, letter concerning air quality issues from Dr. John J. Goodill, M.D., Chairperson of the Environmental and Public Health Committee of the Medical Society of Delaware (MSD), which was addressed to the Delaware Public Service Commission. Dr. Goodill's letter stated:

> "Delawareans can choose to be in a smoke-free environment but we have no choice about the air that we breathe. We were recently provided with resolutions passed by the Florida Medical Association and Medical Association of Georgia which identify coal plants as a major source of pollution, global warming, mercury contamination in ocean wildlife, and as a cause of death, disease, cancer, heart and asthma attacks, strokes, and low birth weight babies."

A front page August 27, 2007, Delaware News Journal article, entitled *Clean air may lead to dirtier landfills,* includes the statement:

> "the EPA is pushing power companies to cut emissions of the sulfur dioxide and nitrogen oxides, which add to smog and acid rain and contribute to thousands of premature deaths, asthma and other respiratory ailments. A large portion of those emissions come from coal plants, the EPA says."

These statements are called to the Environment Committee's attention to emphasize the belief of Medical Associations and the U.S. Environmental Protection Agency that coal burning power plant emissions are a cause of premature deaths, disease, cancer, heart and asthma attacks and other respiratory ailments, strokes, and low birth weight babies.

In view of these determinations, it was disturbing to hear Mr. Ali Mirzakhalili, P.E., Administrator of DNREC-Air & Waste Management-Air Quality Management, argue against locating an air monitoring station in the vicinity of the IRPP – by far the state's largest source of toxic chemical releases in Delaware. The Delaware Toxics Release Inventory Data Detail Report, for reporting year 2005, documents on-site releases of 3,135,357-pounds of pollutants to the air, 741,095-pounds of pollutants to the land, and 4,820-pounds of pollutants to the water. (Attachment 1, *2005 On-site Release Summary by Facility, Appendix E.*)

Rather than focusing on problems associated with emissions from the IRPP, which DNREC has the authority to monitor and regulate, Mr. Mirzakhalili seemed more interested in expounding upon air pollution originating from automobile exhaust and from other power plants located in states to the west of Delaware. It is requested that the Cancer Consortium not divert its attention at this time from investigation of health risks posed by Delaware's coal burning power plants.

When Lt. Gov. John Carney asked Mr. Mirzakhalili to identify the best possible location for a monitoring station to monitor emissions from the IRPP, Mr. Mirzakhalili replied he could not do so without studying the matter and that the cost of another air monitoring site would exceed DNREC's budget for such activities. Mr. Mirzakhalili further indicated that DNREC would likely eliminate one of its existing air monitoring sites in the near future due to cuts in EPA funding support.

Regardless of past rationales for locating the air monitoring site, nearest to the IRPP, upwind in Seaford, current serious health concerns related to coal plant emissions should justify a state mandate for installation of an air monitoring station in the area experiencing the greatest amount of pollution from the plant. It is difficult to believe that funds for this effort can't be located somewhere in the state's budget. The Sierra Club stands ready to assist in obtaining permission for placement of air monitoring equipment on private property near the plant.

As the result of a 2003 Sierra Club initiative, Olga Denyshchyk, a graduate student from the Ukraine, analyzed the pollution generated by the IRPP.[1] Olga's research concluded:

> "the area of the greatest concern could be the 30-km zone of Indian River Power Plant. At the end of the 70's, Crockett and Kinnison proved that the soil within 30 km of the coal-fired power plant contains significant increased levels of mercury, which corresponds to the *wind rose* (a graphical diagram of prevailing wind directions). The mercury concentration in soil varies from 6 to 30 ppm, the mean concentration from 22 ppm (1.0 km radii), to 13ppm (30.0 km radii).[2] . .
>
> "Normally, the pollution distribution corresponds to the wind rose of this region. However, the modeled air pollution distribution does not correspond to the wind rose of Lewes or Seaford. The analysis of the wind rose shows that the predominate wind directions are South-Southwest (9.16% of the total winds), Southwest (9.02%), South (8.20%), Northwest (7.97%), North-Northwest (7.70%), West Northwest (7.19%). So, the most affected can be considered cities, which are located in these directions."
>
> Olga constructed her 2003 wind rose model using "climatic data from the Salisbury International Airport." She reported "the software for the model of the pollution distribution was still under construction, so the process of the modeling is still quite primitive and does not consider a lot of environmental factors, which are different for every pollutant such as washout and other characteristics, which are usually considered in such models. Therefore the model does not make a difference between different pollutants. Nevertheless, this model was used by several organizations in different countries and showed good results."

---

[1] The results of Olga's research are contained in the November 3, 2003, draft copy of her technical report entitled, "Indian River Power Plant Project." Olga performed her work and prepared her report during her stay in the United States on a student visa. At a September 28, 2006, public hearing held in Georgetown, DE, addressing DNREC's proposed Regulation No. 1146 - "Electric Generating Unit (EGU) Multi-Pollutant Regulation," Sallie Callanen, on behalf of the Southern Delaware Group of the Sierra Club, submitted testimony to DNREC, including contents of Olga's 2003 Indian River Power Plant draft report.

[2] Alan B. Crockett, Robert R. Kinnison. Mercury distribution in soil around a large coal-fired power plant. U.S. Environmental Protection Agency Office of Research and Development, Environmental Monitoring and Support Laboratory, Las Vegas, Nevada 89114.

> "The model calculates the concentration of the pollutants by 32 directions and in 10 different radiuses (distances from the IRPP). As radiuses the distance to the closest cities (towns) were chosen." . . . The model shows that **the highest concentration (0.65 microgram/m^3) can be observed in the city (town) of Omar that is a distance of 4.5 miles from the Indian River Power Plant.**"

DNREC should be requested to use the latest available data and technology to construct a wind rose centered on the IRPP with the objective of corroborating or disproving Olga's "primitive" wind rose conclusions regarding location of the highest concentration of pollutants emitted from the plant.

Based on prior personal experience described by a retired medical doctor who attended the August 13th meeting, the high water vapor content of the air surrounding the IRPP (due to its proximity to the river and bay) should be examined as a possible exacerbating factor influencing health impacts from IRPP emissions. The Cancer Consortium is requested to investigate this possibility.

Mr. John Hughes, DNREC Secretary, stated at the August 13th meeting that DNREC was not responsible for determining if IRPP emissions are the cause of the reported cancer cluster. Secretary Hughes requested the Cancer Consortium to identify power plant emissions that could be causing the cancer cluster, and that DNREC would then take steps to monitor those emissions. The Cancer Consortium is requested to comply with Secretary Hughes' request in a timely manner.

According to the 2005 Delaware Toxics Release Inventory Report, Data Summary, published by DNREC in March 2007, (http://www.serc.delaware.gov/information/TRI/2005/2005%20SUMMARY%20REPORT.pdf)

> "Table 4 shows the chemicals on the TRI list that are identified as carcinogens and were reported in Delaware for 2005. Table 4 also shows the number or reports that were received by the TRI program in Delaware for each of these chemicals." (p. 11)

Listed below are the chemicals and compounds identified in Table 4 that were released by the IRPP (Attachment 2, *2005 On-site Releases by Facility and Chemical, Appendix C*).

> "TABLE 4 - CARCINOGENS REPORTED BY DELAWARE FACILITIES FOR 2005 (p. 11)
>
> **CHEMICAL NAME REPORTS**
> ARSENIC COMPOUNDS 2
> BENZENE 6 ? (BENZO(G,H,I)PERYLENE is listed in Appendix C)
> CHROMIUM COMPOUNDS 10
> COBALT COMPOUNDS 3
> LEAD COMPOUNDS 14
> NAPHTHALENE 6

NICKEL COMPOUNDS 6
POLYCYCLIC AROMATIC COMPOUNDS 13
Source: 2005 DNREC Database, December 1, 2006"

The 2001 Delaware Toxics Release Inventory Report, Data Summary, published by DNREC in April 2003 (http://www.serc.delaware.gov/docs/01tri/04-%202001%20REPORT%20pages%201-12.pdf) states:

> "FACILITIES ARE ALLOWED TO BASE TRI DATA ON MEASUREMENTS AND MONITORING DATA IF THESE ARE AVAILABLE. **If such data is not available, quantities are estimated based on published emission factors, mass balance calculations, or good engineering judgment. Additional monitoring equipment and measurements are not required.**" (p. 6)

With the potential for serious health impacts related to the IRPP, TRI data for this facility should not be estimated. In addition to accurate measured emission data from the IRPP stacks, measured emission data should be demanded from a new monitoring site located in the vicinity of the power plant.

DNREC claims that its TRI data,

> "DOES NOT INDICATE AMOUNT OF HUMAN EXPOSURE. An important consideration to keep in mind is that TRI does not provide an indication of potential exposure to the reported releases and cannot be used by itself to determine the impact on public health. The chemical's release rate, toxicity, and environmental fate, as well as **local meteorology and the proximity of nearby communities to the release must be considered when assessing exposures**. Small releases of highly toxic chemicals may pose greater risks than large releases of less toxic chemicals. The potential for exposure increases the longer the chemical remains unchanged in the environment. Some chemicals may quickly break down into less toxic forms, while others may accumulate in the environment, becoming a potential source of long term exposure. **The chemical exposure of a population depends on the environmental media (air, water, land) into which the chemical is released. The media also affects the type of exposure possible, such as inhalation, dermal exposure, or ingestion.**" (p. 6)

The above statement provides ample justification for performing the monitoring necessary to determine the impact on public health of the state's two largest sources of toxic chemical releases. Without collecting and analyzing local meteorology data, how can the chemical exposure of populations in the communities located near the power plants be accurately determined?

If new air monitoring equipment is installed in the vicinity of the IRPP and is made operational for a year, or more, before NRG installs promised pollution control devices at its plant, an opportunity will be created for the collection of data before and after plant upgrades, thus providing a measure of the extent of pollution abatement actually achieved.

My wife and I live on Indian River Bay, not far from the coastal highway and within sight of the IRPP smoke stacks. We can testify from personal experience about the significant difference in viewing clarity of the plant's stacks depending upon wind direction. The stacks appear almost crystal clear if the wind is blowing from the east, and shrouded in haze if the wind is coming from the west or is non-existent. I submit that a rough measure of the prevailing wind direction and relative amount of pollution hanging in the air from IRPP discharges could be obtained by simply comparing daily photographs taken from the Indian River Inlet Bridge.

Only on days when the IRPP stacks are clearly visible do I feel comfortable spending time out of doors. This is a rather sad admission from someone who retired near the Delaware seashore for the mistaken opportunity to breathe clean healthy air everyday. About 17 months ago my wife was diagnosed with asthma. She now must use nebulized bronchodilators as a chronic medical treatment for control of her reactive airway disease symptoms.

At IRPP thousands of cubic yards of coal-ash are deposited each year in a huge unlined active landfill located on the site, which is rarely noticed by the public and possibly state officials, since the landfill is almost totally hidden from view and guarded by a chain-link fence (See photos – Attachments 3, 4, 5 & 6). In 2006 NRG's IRPP burned approximately 1.65 million tons of coal, which produced approximately 37,900 cubic yards of fly ash and approximately 66,200 cubic yards of bottom ash. Leachate from coal-ash landfills is high in sulfate and iron and often contains a variety of heavy metals, including arsenic. Studies indicate that arsenic is likely to be one of the most soluble of the metals leached from the ash into the ground.

The 741,095-pounds of pollutants released to the on-site IRPP landfill for TRI reporting year 2005 consisted of 29,000-pounds of arsenic compounds, 280,000-pounds of barium compounds, 57,000-pounds of chromium compounds, 18,000-pounds of cobalt compounds, 58,000-pounds of copper compounds, 23,062-pounds of lead compounds, 70,000-pounds of manganese compounds, 33-pounds of mercury compounds, 45,000-pounds of nickel compounds, 100,000-pounds of vanadium compounds, and 61,000-pounds of zinc compounds, which represent 19% of the total on-site IRPP releases. (Attachment 2, *2005 On-site Releases by Facility and Chemical, Appendix C.*)

Several years ago an inactive unlined ash landfill on the eastern end of Burton Island was reportedly the cause of increasing levels of total arsenic observed during surface-water monitoring in Island Creek. According to the News Journal's, August 27, 2007, article, *Clean air may lead to dirtier landfills,* the owners of the IRPP "closed and covered the ash pile based on standards used in the late 1970s, but waves along Indian River and a tributary called Island Creek ate away at protective bulkheads and shorelines, exposing the ash to the river."

The Delaware News Journal reported in an August 29, 2007, article, entitled *EPA reports cancer risks surrounding coal waste*, that "Piles of ash generated by power plants and industry could cause toxic water pollution and high risks of cancer if they are poorly managed, the Environmental Protection Agency said in a newly released document. . . . The EPA reported that arsenic, thallium and other hazardous compounds in mismanaged fly ash piles and impoundments can create serious hazards. Cancer risks from arsenic-tainted groundwater

around large, wet fly ash impoundments can rise to more than 600 times the current EPA "level of concern" for arsenic."

The Energy Information Administration (EIA), which provides official energy statistics from the U.S. Government, identifies a steady increase in the quantity of coal delivered to the IRPP:

Year	Total Tons of Coal Delivered
2002	921,774
2003	1,015,460
2004	1,558,820
2005	1,569,560
2006	1,655,129

(As an aid in visualizing this enormous 2006 volume - it equates to delivery of approx. 65 railroad hopper cars of coal to the IRPP every day of the year – assuming 70-ton hopper car capacity.)

The increase in coal delivered between 2002 and 2006 was 733,355-tons (approx. 10,476 hopper car loads), which means even greater quantities of fly ash and bottom ash were deposited on the power plant's landfill.

The EPA developed standards in 2000 for hazardous air pollutants, but unfortunately standards were not concurrently developed to control collected airborne pollutants after they were shifted to either liquid or solid waste streams. In the absence of standards addressing these other waste streams (which Delaware has not yet developed), the release of toxic chemicals into the IRPP landfill will continue to threaten water contamination. A mandate for establishing state standards for leachates from coal-ash landfills is essential.

The *American Lung Association State of the Air 2006* recommends key steps needed to improve the air we all breathe. Those steps include setting much more protective limits on particle pollution in the air, protecting the Clean Air Act and cleaning up dirty power plants. According to the American Lung Association, "old, coal-fired power plants are among the biggest industrial contributors to unhealthful air, especially particle pollution in the eastern United States. The toll of death, disease and environmental destruction caused by coal-fired power plant pollution continues to mount."

The Sierra Club requests that it be kept informed about initiatives by the Cancer Consortium Environment Committee and Advisory Council aimed at the monitoring of air quality in the vicinity of Delaware's coal burning power plants, and the evaluation of health risks related to toxic chemical and fine particulate matter emissions, (smaller than 2.5 microns), from these plants.

If the state is truly committed to providing a safer and more healthful environment in the future, the air quality in the vicinity of the state's two largest polluters - the coal burning power plants at Indian River and Edge Moor, should be monitored and the resultant data published to inform citizens about environmental health risks in their communities, thus providing strong justification for cleaning up the toxic chemical releases from these plants. Focus should be on this clean-up objective.

Yours truly,

Steve Callanen
Chairman, Energy Subcommittee,
Southern Delaware Group, Sierra Club
302-539-0635

Copy to:
Lt. Governor John C. Carney, Jr., DE Cancer Consortium Advisory Council Member
John Hughes, DNREC Secretary, DE Cancer Consortium Advisory Council Member
Ali Mirzakhalili, Administrator of DNREC-Air & Waste Management-Air Quality Management
Sen. David B. McBride, DE Cancer Consortium Advisory Council Member
Sen. Liane M. Sorenson, DE Cancer Consortium Advisory Council Member
Rep. Bethany A. Hall-Long, RNC, PhD, DE Cancer Consortium Advisory Council Member
Sen. Margaret Rose Henry (Senate District 2 containing Edge Moor Power Plant)
Sen. George H. Bunting Jr. (Senate District 20 containing IRPP)
Sen. F. Gary Simpson (Senate District 18 near IRPP)
Rep. Diana M. McWilliams (House District 6 containing Edge Moor Power Plant)
Rep. Gregory A. Hastings (House District 41 containing IRPP)
Dr. Kim Furtado, Citizens for Clean Power
John Austin, retired EPA scientist, Citizens for Clean Power
Pat Gearity, retired lawyer, Citizens for Clean Power
Kit Zak, founding member, Citizens for Clean Power
Richard Anthony, Chair, Southern Delaware Group, Sierra Club
Tim O'Connor, Conservation Chair, Delaware Chapter, Sierra Club
Edward A. Lewandowski, Executive Director, Center for the Inland Bays

APPENDIX E

2005 ON-SITE RELEASE SUMMARY BY FACILITY

RANKED BY ON-SITE RELEASES (in pounds)

FACILITY	AIR	WATER	LAND	ON-SITE RELEASES	OFF SITE TRANSFERS	ON-SITE WASTE MGMT.
INDIAN RIVER POWER PLANT	3,135,357	4,820	741,095	3,881,272	9,704	1,219,000
EDGE MOOR/HAY ROAD POWER PLANTS	1,494,761	5,535	0	1,500,296	294,176	133,627
PREMCOR	515,834	361,516	0	877,350	1,460,481	31,432,359
INVISTA SEAFORD	280,843	310,500	10,976	602,319	7,168	430,000
PERDUE GEORGETOWN	0	385,000	90	385,090	0	0
DUPONT EDGE MOOR	239,177	143,377	0	382,554	4,063,796	20,805,786
DAIMLER CHRYSLER	206,164	0	0	206,164	238,057	61,990
FORMOSA PLASTICS	179,118	12	0	179,130	0	201,858
GENERAL MOTORS	79,108	0	0	79,108	205,837	37,980
SUNOCO	73,078	0	0	73,078	0	0
NRG DOVER	38,811	0	0	38,811	395	20,000
HONEYWELL	36,230	0	0	36,230	61,290	0
JUSTIN TANKS	30,062	0	0	30,062	360	0
CIBA SPECIALTY CHEMICALS	28,120	0	0	28,120	2,363,419	693,832
HANOVER FOODS	19,760	0	0	19,760	0	0
CAMDEL METALS	15,333	0	0	15,333	2,279	0
DOW REICHHOLD	14,164	0	0	14,164	355	1,685,328
HIRSH INDUSTRIES	13,535	0	0	13,535	0	0
ARLON	11,932	0	0	11,932	38,099	161,580
AGILENT TECHNOLOGIES NEWPORT	7,716	0	0	7,716	153,889	0
CYTEC INDUSTRIES INC	6,681	0	0	6,681	303,719	0
UNIQEMA	5,679	80	0	5,759	19,074	2,524
CLAYMONT STEEL	4,686	59	733	5,478	2,294,827	0
JOHNSON POLYMER	4,677	0	0	4,677	2,351	4,053
SPATZ FIBERGLASS	4,652	0	0	4,652	0	0
NORAMCO	4,232	0	0	4,232	1,773,527	2,179,029
ROHM & HAAS	3,218	0	0	3,218	595,112	4,320,113
ORIENT	3,197	0	0	3,197	8	11,486
PRINCE MINERALS	2,038	877	0	2,915	0	0
MARBLE WORKS	2,879	0	0	2,879	0	0
DENTSPLY CAULK WEST	2,254	0	0	2,254	38,321	0
DUPONT RED LION PLANT	2,148	0	0	2,148	0	0
MEDAL	1,980	0	0	1,980	104,591	3,191,160
ROHM & HAAS TECH CENTER	1,764	0	0	1,764	157,884	0
ROHM & HAAS BUILDING 7	1,337	0	0	1,337	12,111	0
KUEHNE COMPANY	471	0	0	471	0	0
OCCIDENTAL CHEMICAL	290	17	0	308	384,304	1,401,980
PPG DOVER	265	0	0	265	18,313	0
PICTSWEET	200	0	0	200	0	0
VP RACING FUELS	160	0	0	160	2,655	0
JOHNSON CONTROLS	104	4	0	108	4,793,043	0
MACDERMID	14	0	0	14	0	519
SPI POLYOLS	10	1	0	11	96,313	0
METAL MASTERS	10	0	0	10	462,701	0
DOVER AFB	8	0	0	8	0	0

Attachment #1

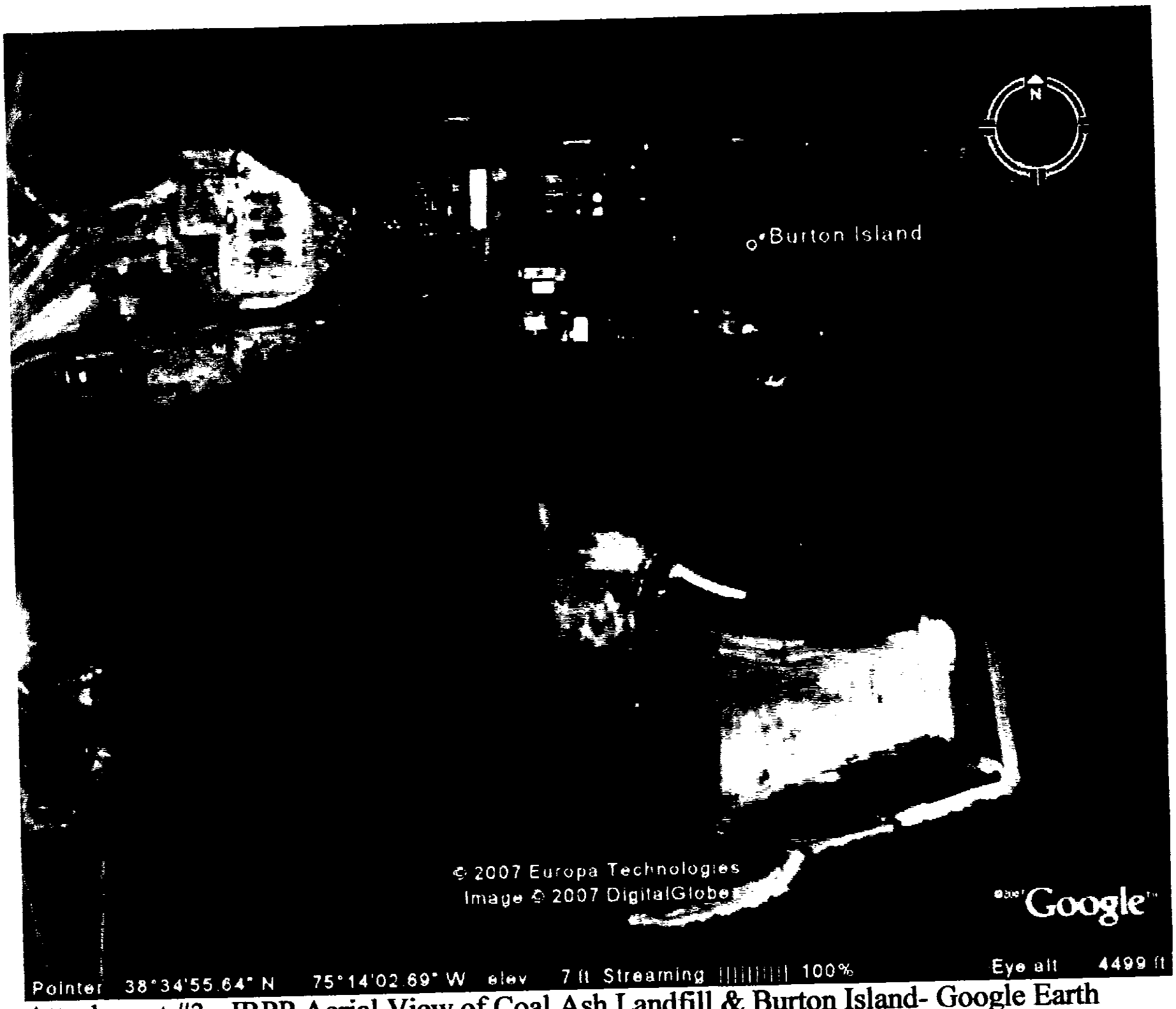
APPENDIX C
2005 On-Site Releases by Facility And Chemical

(in pounds)

FACILITIES ARRANGED ALPHABETICALLY	FORM A	ON SITE RELEASES AIR	WATER	LAND	TOTAL	OFF SITE TRANSFERS	ON SITE WASTE MGMT.
INDIAN RIVER POWER PLANT							
AMMONIA		15,000	0	0	15,000	9,700	830,000
ARSENIC COMPOUNDS		755	5	29,000	29,760	0	0
BARIUM COMPOUNDS		3,205	750	280,000	283,955	0	0
BENZO(G,H,I)PERYLENE		0	0	0	0	0	0
CHROMIUM COMPOUNDS		755	250	57,000	58,005	0	0
COBALT COMPOUNDS		255	5	18,000	18,260	0	0
COPPER COMPOUNDS		255	2,800	58,000	61,055	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS		0	0	0	0	0	0
HYDROCHLORIC ACID		2,800,000	0	0	2,800,000	0	13,000
HYDROGEN FLUORIDE		200,000	0	0	200,000	0	26,000
LEAD COMPOUNDS		638	0	23,062	23,700	4	0
MANGANESE COMPOUNDS		755	5	70,000	70,760	0	0
MERCURY COMPOUNDS		172	0	33	205	0	0
NAPHTHALENE	1	0	0	0	0	0	0
NICKEL COMPOUNDS		755	250	45,000	46,005	0	0
POLYCYCLIC AROMATIC COMPOUNDS		2	0	0	2	0	0
SULFURIC ACID		110,000	0	0	110,000	0	350,000
VANADIUM COMPOUNDS		1,205	5	100,000	101,210	0	0
ZINC COMPOUNDS		1,605	750	61,000	63,355	0	0
Facility Total		3,135,357	4,820	741,095	**3,881,272**	**9,704**	**1,219,000**

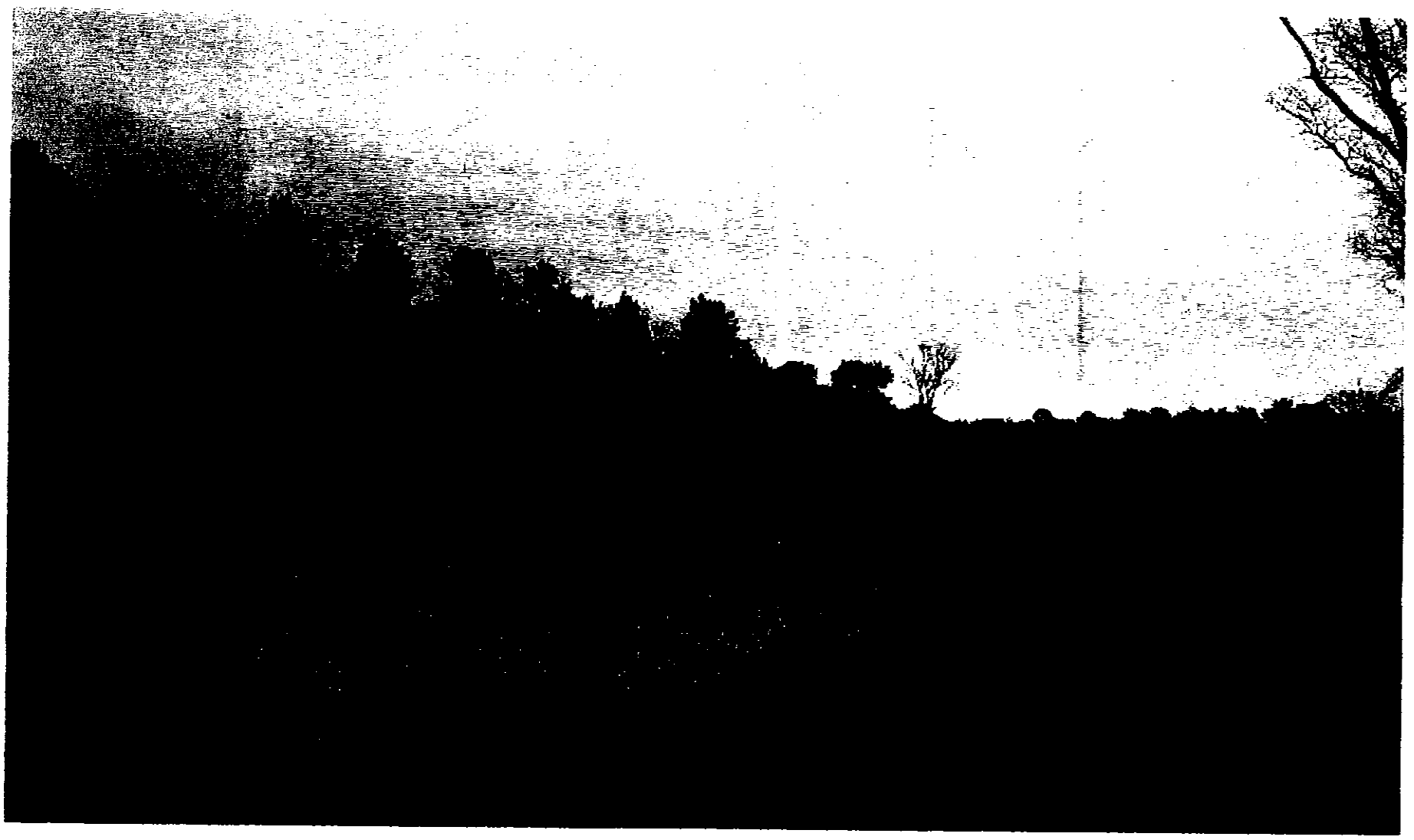
1. All amounts are in pounds
2. Source: DNREC 2005 Database, 12-01-06
3. A "1" in the Form A column indicates Form A. Form A does not report amounts.

Attachment #2

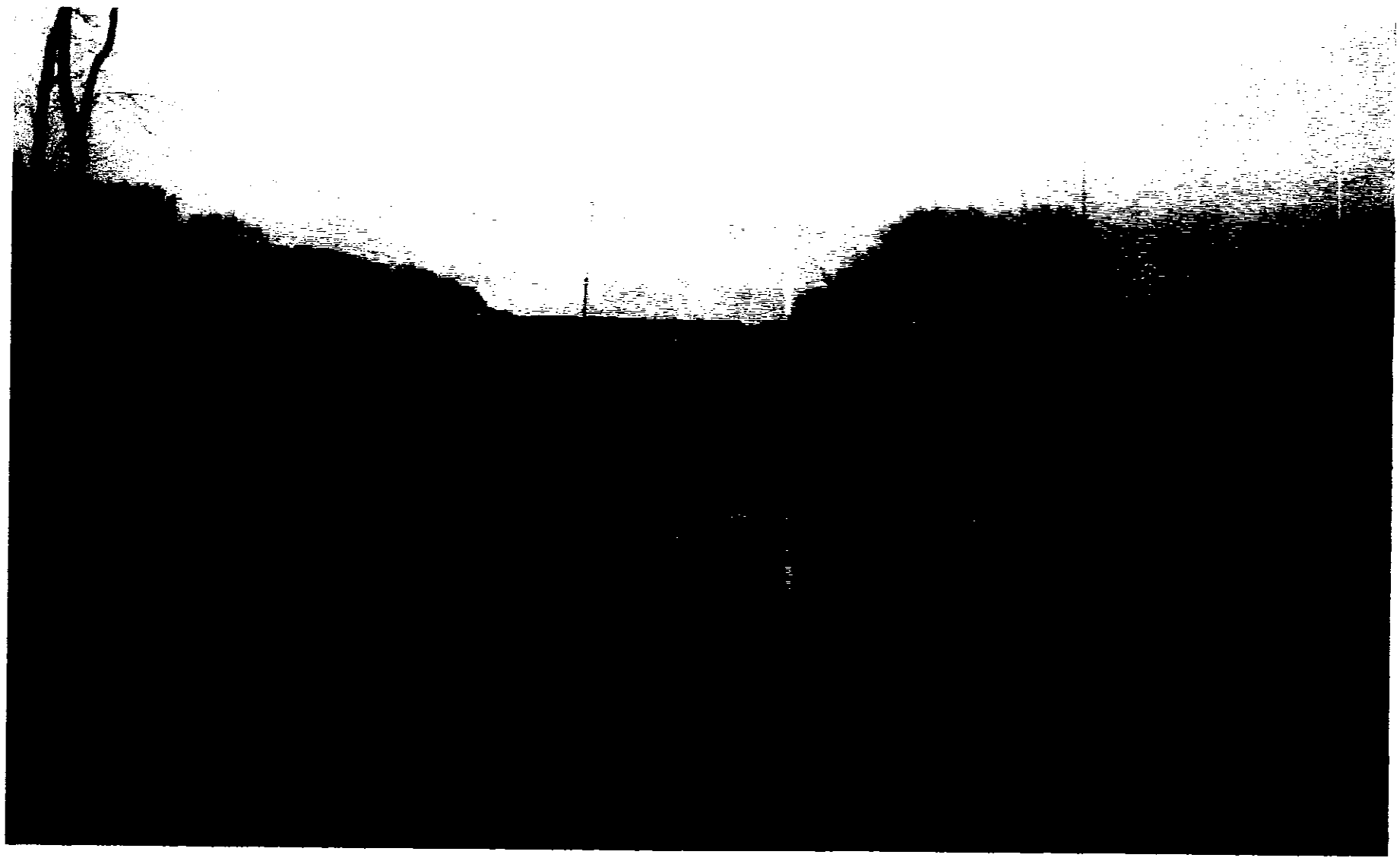


Attachment #3 - IRPP Aerial View of Coal Ash Landfill & Burton Island- Google Earth

Attachment #4 - IRPP Coal Ash Landfill 12-13-06 1935



Attachment #5 - IRPP Coal Ash Landfill 12-13-06 QF85 1937



Attachment #6 - IRPP Coal Ash Landfill 12-13-06 QF85 1938

588 Pilottown Road
Lewes, DE 19958
November 7, 2007

Arnetta McRae, Chair
Delaware Public Service Commission
861 Silver Lake Blvd
Dover DE 19904

Dear Chair McRae:

Delaware needs and deserves wind power – it is the only logical solution when you consider public health and global warming issues. "Cost" needs to be measured in terms of more important things than dollar amounts.

I have reviewed Bluewater Wind's November 6, 2007, Reply to the PSC staff report. I fully support the Bluewater Wind offshore project. Please direct the PSC staff & Independent Consultant to promptly conclude negotiations and adopt Bluewater Wind's proposals. Bring price-stable, cost-effective, long-term, non-polluting in-state offshore wind to Delaware.

Sincerely,

J. Madeline Lewis

J. Madeline Lewis

Please file this letter in the Delmarva Power RFP public record.